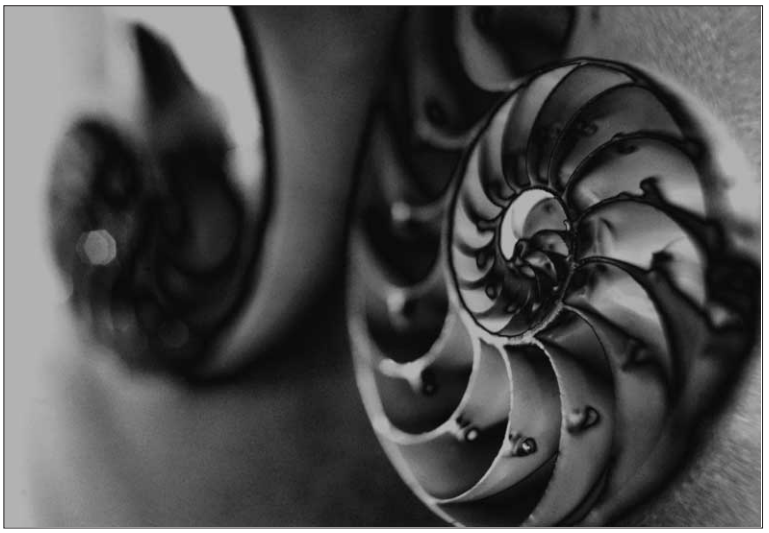
Guide to UNIX® Using Linux



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Introduction

Guide to UNIX Using Linux introduces the fundamentals of the UNIX operating system to the PC user. UNIX is "the operating system of the Internet," powerful and flexible enough for both servers and desktop computers. Taking a hands-on, practical approach, this book guides you through the basics of UNIX system concepts, architecture, and administration. You practice these basic concepts and approaches using Linux, a PC-compatible clone of UNIX that is an ideal teaching tool for mastering UNIX commands. The book achieves its goals with a proven combination of tools that powerfully reinforce both concepts and real-world experience.

This book includes:

- RedHat Linux 6.0 and complete installation instructions
- Comprehensive review and end-of-chapter material, including a command summary, review questions, hands-on exercises, and case projects, which let you practice and master skills as you learn them
- Step-by-step instructions to teach UNIX commands, shell programming, database management, text editing, C programming, debugging, and rapid application development using standard UNIX tools such as awk, sed, and perl
- A proven method to provide a working knowledge of basic system administration requirements and how to achieve them

In addition, the text is carefully structured, clearly written, and accompanied by graphics that provide the visual reinforcement essential to learning. And for instructors using the book in a classroom, a special CD-ROM is available that includes an instructor's manual and an online testing system. Contact customer service or your sales representative to obtain a copy of the CD-ROM.

Coverage is balanced, with one chapter building on the skills and knowledge acquired in the preceding chapters. Operating systems, and UNIX and Linux in particular, are introduced in **Chapter 1**, along with essential information such as using UNIX shells, entering commands, and understanding the role of the system administrator. **Chapter 2** explores the UNIX file system—its partitions and directories—and how to navigate it. **Chapter 3** focuses on the UNIX editors, providing instruction on using the vi and Emacs editors. **Chapter 4** explains the UNIX approach to file processing, while **Chapter 5** covers advanced file processing concepts. **Chapters 6 and 7** introduce you to shell programming, and **Chapter 8** provides practice with UNIX utilities. **Chapters 9 and 10** teach programming tools such as awk, sed, perl, and C/C++. **Chapter 11** covers a recent development in UNIX: the X Window system, which provides a graphical user interface for UNIX.

Features

In order to ensure a successful learning experience, this book includes the following pedagogical features:

- **Learning Objectives:** Every chapter opens with a list of learning objectives that sets the stage for you to absorb the lessons of the text.
- **Case Approach:** Each chapter opens with a hypothetical case. You solve the problem posed by the case by working through the material in the chapter.
- **Comprehensive Step-by-Step Methodology:** The unique Course Technology methodology keeps students on track. The text introduces new concepts, illustrates them through examples, and guides you through practice steps to achieve mastery of the material.
- **Tips:** Tips, which are marked with the Tip icon, are used to highlight additional helpful information related to the subject being discussed.
- **Summaries:** Following each chapter is a summary that recaps the concepts covered in the chapter, and a table listing the related commands and their options.
- **Review Questions:** Each chapter concludes with meaningful, conceptual review questions that test students' understanding of what they learned in the chapter.
- **Exercises:** The review questions are followed by exercises, which provide students with additional practice using the skills and concepts they learned in the chapter.
- **Discovery Exercises:** Each chapter concludes with Discovery Exercises, which reinforce the chapter concepts and allow for independent study.
- **RedHat Linux 6.0:** Each book is bundled with a copy of RedHat Linux 6.0. Linux is a PC-compatible clone of UNIX that is an ideal teaching tool for many basic and advanced UNIX commands. Course Technology does not offer Technical Support for this software. However, if there is a problem with the media, please contact customer service or your sales representative.

Supplements

For instructors using this book in a classroom environment, the following teaching materials are available on a single CD-ROM:

Electronic Instructor's Manual: The Instructor's Manual that accompanies this textbook includes a list of objectives for each chapter, a detailed chapter lecture notes, suggestions for classroom activities, discussion topics; and solutions.

Course Test Manager 1.2: Accompanying this book is a powerful assessment tool known as the Course Test Manager. Designed by Course Technology, this cutting-edge Windows-based testing software helps instructors design and administer tests and pretests. In addition to being able to generate tests that can be printed and administered, this full-featured program also has an online testing component that allows students to take tests at the computer and have their exams automatically graded. The test bank that accompanies this book contains 50–100 questions per chapter.

PowerPoint Presentations: This book comes with Microsoft PowerPoint slides for each chapter. This lecture tool covers all of the key points and art for each chapter. The Presentations are included as a teaching aid for classroom presentation, to make available to students on the network for chapter review, or to be printed for classroom distribution.

System Requirements

To install Red Hat Linux 6, your computer must meet the following minimum requirements:

- Intel 486 processor
- 16 MB of RAM
- 500 MB free hard disk space
- 3.5-inch floppy drive
- CD-ROM drive

To access a UNIX/Linux host on a local-area network to which your computer is connected, you need the following software and information:

- Telnet program
- Either the IP address or the host and domain name of the UNIX system

To access a UNIX/Linux host via the Internet, you need the following software and information:

- Dial-up connection to an Internet Service Provider
- Telnet program
- Either the IP address or the host and domain name of the UNIX system

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– Jack Dent

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